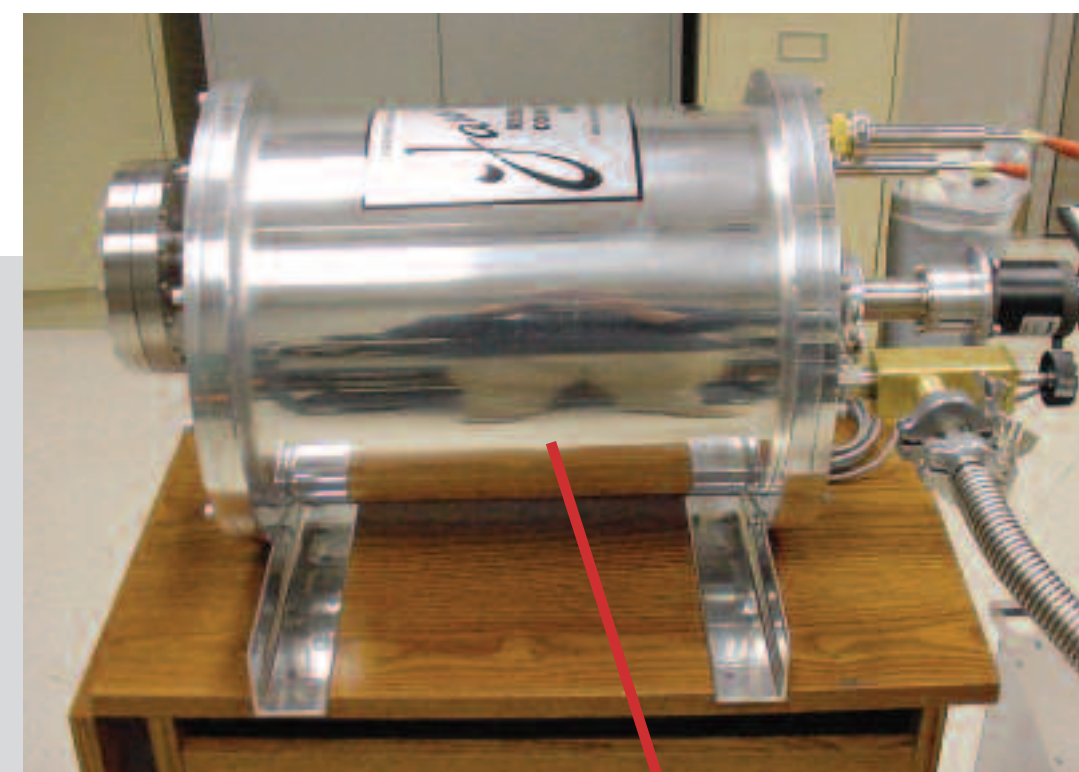


## ITT's ABI IR Calibration Emphasizes Thorough Pre-Launch Characterization and Instrument-Instrument Repeatability.



Large cold-walled chamber reduces background impact on calibration

Chamber accommodates both Space and Earth scene cal targets as well as ABI itself



TSSR measures source output in multiple IR bands and provides long-term link between all cal targets



Radiometer used to map cal target uniformity and provide emissivity comparison of both internal and external cal targets

To External 5-bounce Trap Ground Calibration Target or Earth Scene (on-orbit)

Temp sensors throughout instrument allow determination of impact of instrument conditions on calibration

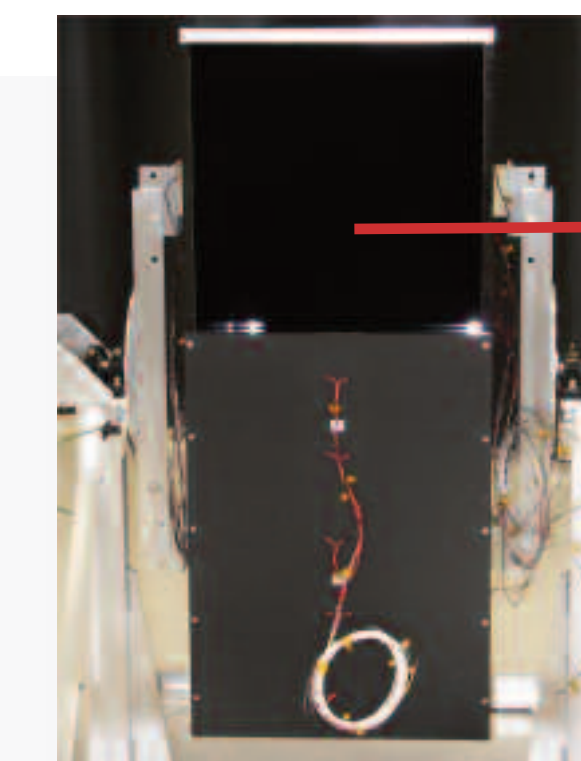
Scan mirror rotates to either Earth scene (external view) or to internal cal target

On-orbit 2-point calibration uses space and ICT look

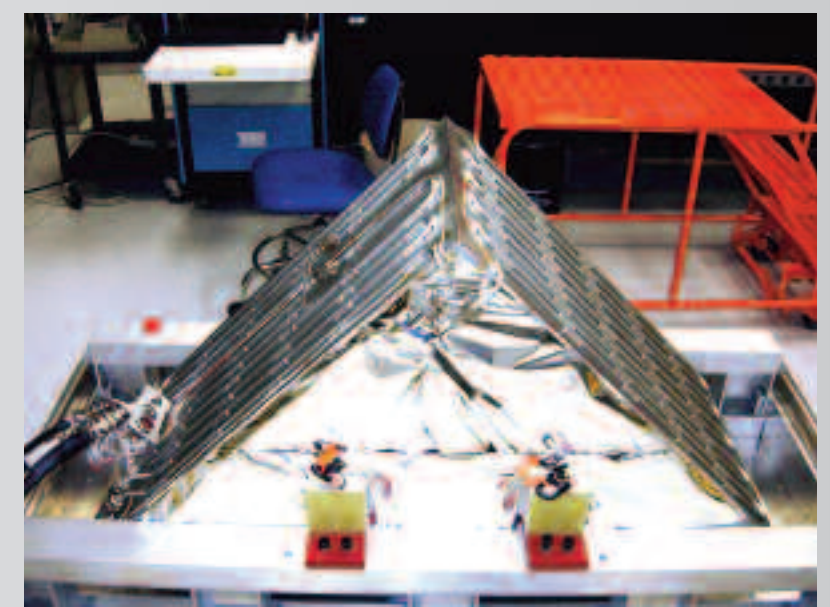
3 Bounce Blackbody Calibration Target

### ABI Calibration Looks to the Future:

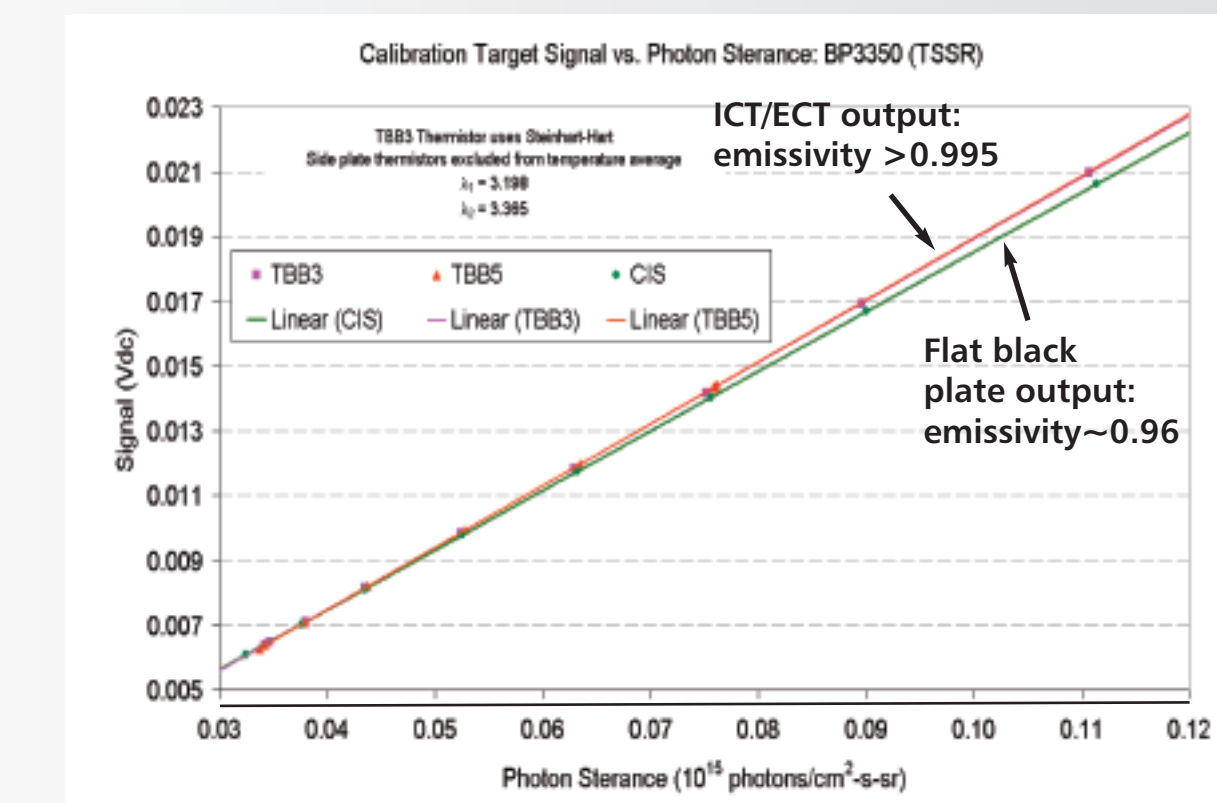
- Comparison and characterization of all targets used in flight and pre-launch calibration ensure best possible data continuity between instruments
- Common temperature sensor lots used throughout program reduces relative temperature uncertainty
- Robust *Aeroglaze Z302* paint in trap design for long term stability of cal target output – targets painted and assembled together to increase consistency between instruments
- Impact of change in surface reflectance and on-orbit environmental conditions reduced by trap design



Minimal light escapes trap target

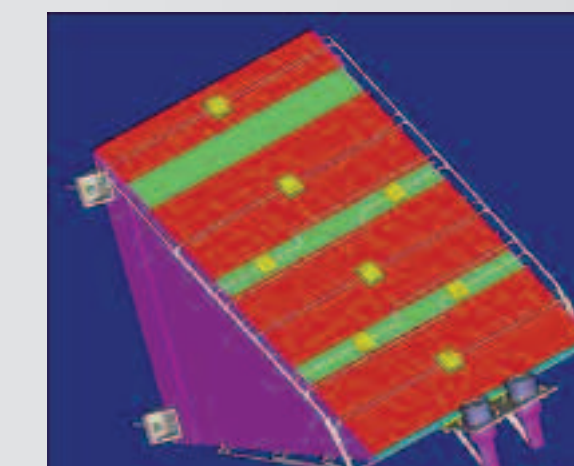


Large Aperture External Calibration Target



Direct pre-launch comparison of ground and on-orbit calibration targets using TSSR to link instrument calibrations throughout entire program.

*Aeroglaze Z302* paint provides low-reflectance specular coating needed for high-emissivity trap-blackbody



Full-Aperture Internal Calibration Target.

